

Special Issue

Digital Twin Technologies: Concepts, Methods, and Applications

Message from the Guest Editors

This Special Issue invites authors to submit high-quality contributions that advance the theory, methods, and applications of digital twins, as well as other research in this field. We welcome original research, reviews, and visionary perspectives on, but not limited to, the following topics:

- Foundations of Digital Twins: modeling, simulation, standardization, and interoperability.
- AI and Machine Learning for Digital Twins: predictive modeling, anomaly detection, and adaptive control.
- Cybersecurity and Trust: data integrity, privacy, and resilient architectures for digital twin systems.
- Domain-Specific Applications: energy and power systems, Industry 4.0, smart grids, transportation, healthcare, aerospace, and urban infrastructure.
- Experimental Twins and Scaled Prototypes: validation methods and real-world case studies.
- Future Directions: scalable architectures, edge/cloud integration, and cross-domain digital twin ecosystems.

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About the Journal

Message from the Editor-in-Chief

The intricate relationship between theory and experiment is the cornerstone of engineering progress. At the Journal of Experimental and Theoretical Analyses (JETA), we are committed to exploring these connections through rigorous and innovative research. The journal is a dedicated platform for presenting pioneering analyses that push the boundaries of what is possible in engineering.

Our journal serves as a crucial nexus where theoretical insights meet experimental validation, advancing the understanding of complex engineering phenomena. The comprehensive exploration of these topics not only contributes to academic knowledge, but also leads to practical applications that address real-world engineering challenges.

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